

WE CLAIM:

1. An immunogen-carrier complex having an immupotentiation property, consisting of a viral-like particle (VLP) carrying at least one immunogen in fusion with a protein or fragment thereof of said VLP.
2. The immunogen-carrier complex of claim 1, wherein said immupotentiation property is at least one of an adjuvant effect, a capacity to enhance cell-mediated dependent antibody production or T-cell dependent antibody production, or the capacity of enhancing the expression of at least one costimulator on magrophages or other antigen presenting cells.
3. The immunogen-carrier complex of claim 1, wherein said immunogen is selected from the group consisting of a peptide, a protein, an hapten, and an allergen.
4. The immunogen-carrier complex of claim 1, wherein said immunogen is a viral, a bacterial, or a parasitical protein or fraction thereof capable of inducing an immune response in a human or an animal.
5. The immunogen-carrier complex of claim 1, wherein said immunogen is in carboxy- or amino-terminal fusion with a capsid, coque, or membrane protein of said VLP.
6. The immunogen-carrier of claim 1, wherein said VLP is a virus, a virus particle, a virion or a particle derived from assembly of a viral coat protein.

7. The immunogen-carrier complex of claim 1, wherein said VLP is selected from the group consisting of a plant potexvirus.
8. The immunogen-carrier complex of claim 7, wherein said potexvirus is a papaya mosaic virus.
9. The immunogen-carrier complex of claim 1, wherein said immunogen is in fusion at the outer surface of said VLP.
10. The immunogen-carrier complex of claim 1, wherein said immunogen is composed of one or more antigen domain, each antigen domain triggering a specific immune response.
11. The immunogen-carrier complex of claim 1, wherein said VLP is carrying immunogens having more than one specificity.
12. A method for immunopotentiating an immune response in a human or an animal which comprises administering to said human or animal an immunogen-carrier consisting of a viral-like particle (VLP) carrying at least one immunogen in fusion with a protein or fragment thereof of said VLP, or administering a VLP or a fragment thereof concomitantly with an antigen not directly linked to said VLP.
13. A polynucleotide encoding a immunogen-carrier complex consisting of a viral-like particle (VLP) carrying at least one immunogen in fusion with a protein or A polynucleotide encoding a immunogen-carrier complex consisting of a fragment thereof of said VLP, or a VLP alone, said immunogen-carrier complex

having the capacity of being assembled when expressed in a plant cell, an animal cell or a microorganism.

14. Use of a VLP or an immunogen-carrier complex consisting of a viral-like particle (VLP) carrying at least one immunogen in fusion with a protein or fragment thereof of said VLP in the preparation of a composition for inducing an immune response against said protein or fragment thereof.

15. A composition for immunopotentiating an immune response against an antigen comprising VLP or an immunogen-carrier complex consisting of a viral-like particle (VLP) carrying at least one immunogen in fusion with a protein or fragment thereof of said VLP.

16. An immunopotentiator comprising VLP or a fragment thereof.

17. A composition comprising a viral-like particle (VLP) and a protein or an extract derived from a virus, bacteria or parasite.

18. The composition according to claim 17, for use as a vaccine.

19. Use of a papaya mosaic virus as an adjuvant.